

Microsoft Business Intelligence

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What is BI?

Business intelligence (**BI**) is a business management term, which refers to applications and technologies that are used to gather, provide access to, and analyze data and information about company operations.

www.wikipedia.com

- Reports
- Scorecards
- Dashboards
- Key Performance Indicators
- Portals
- Collaboration
- Analytics
- Spreadsheets



Give me a dashboard!



NASCIO - Priority Technologies, Applications and Tools

Top 10 Final Ranking

1. Virtualization (storage, computing, data center)
2. Document/Content/E-mail management (active, repository, archiving, digital preservation)
3. Legacy application modernization and upgrade (ERP)
4. Networking, voice and data communications, unified communications
5. Web 2.0 (services, collaboration technologies, social computing)
6. Green IT technologies and solutions
7. Identity and access management
8. Geospatial analysis and Geographic Information Systems (GIS)

9. Business Intelligence (BI) and analytics applications

10. Mobile workforce enablement



It's easy to get lost...





BI can make your information flow like water



Microsoft Business Intelligence for Government

Microsoft Business Intelligence is a complete offering that enables all decision makers to drive increased performance in your government agency

- Integrated Business Intelligence
- Delivery of Business Intelligence through Microsoft Office
- Affordable (use what you own)
- The right information to the right people at the right time!



Microsoft's Commitment to Business Intelligence



The Magic Quadrant is copyrighted February, 2008 by Gartner, Inc. and is reused with permission. The Magic Quadrant is a graphical representation of a marketplace at and for a specific time period. It depicts Gartner's analysis of how certain vendors measure against criteria for that marketplace, as defined by Gartner. Gartner does not endorse any vendor, product or service depicted in the Magic Quadrant, and does not advise technology users to select only those vendors placed in the "Leaders" quadrant. The Magic Quadrant is intended solely as a research tool, and is not meant to be a specific guide to action. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

"This Magic Quadrant graphic was published by Gartner, Inc. as part of a larger research note and should be evaluated in the context of the entire report. The Gartner report is available upon request from Jennifer Pisani, Microsoft."

What are other State
Agencies doing?

Sustainability

Project Sustainability by MetroStar Systems, Inc.

Staff Commuting Survey

General

Staff ID

Miles commuted to work (one way)

Are you a full-time employee?

Part-Time Employee

Average number of days worked per week

Average number of weeks worked per year

Number of days worked from home per year

Number of days traveled on business per year

Commuting To Work By Car

Do you drive on your way to work?

Commuting To Work By Bicycle/Walking

Do you bike/walk on your way to work?

Commuting To Work By Commuter-Rail/Train

Do you take the commuter-rail on the way to work?

Do you take the train on the way to work?

Commuting To Work By Bus

Do you take the bus on the way to work?

project SUSTAINABILITY

Developed By:



SUSTAINABILITY INITIATIVES IN THE City of PORTLAND

Our City will be a leader in demonstrating the ability of our City government to both deliver outstanding government services while doing everything possible to protect our environment and reduce our CO2 emissions. Under my leadership and with the strong support of our citizens we have adopted the overall City goal to reduce our CO2 emissions 25% by 2015.

Setting such a goal requires that we evaluate every current government process, service, procurement, and citizen interaction with the focus on how we can improve the delivery of citizen services and reduce our use of fuel and electricity. Initiatives such as purchasing hybrid or alternative fuel vehicles; providing more citizen services on line; and others are already underway.

Over the last six months we have been ramping up our telework and flex schedule programs to allow our employees to reduce their CO2 emissions.

Taken in total, these sustainability initiatives place us at the forefront as the new face of the American city.

Sincerely,
John Smith, Mayor

Sustainability	Previous Period	Current Period	Difference	Goal	Energy Savings	Lbs. of CO2 Reduced	Acres of Trees Equivalent	# Cars Removed
Sustainability Initiatives Summary	480	480	0		\$9,837	47,323	4	4
Telework Initiatives								
Current Telework Employees	40	80	+ 9	100%	\$6,182.28	29,762	4	3
Current % Telework	8.33%	16.67%	1.00%	30%				
Flexible Work Schedule Initiatives								
Current Flex Schedule Employees	188	212	+ 4	10	\$3,655	17,560	2	2
Current % on Flexible Schedule	23%	24%	1%	20%				

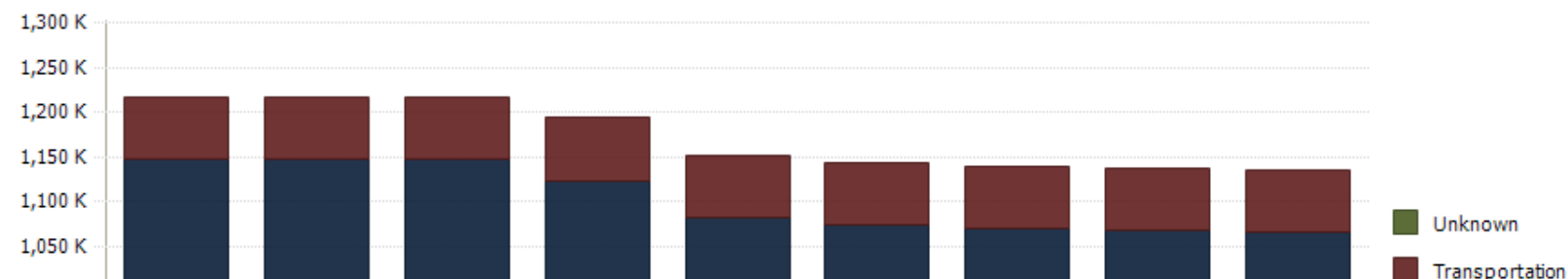


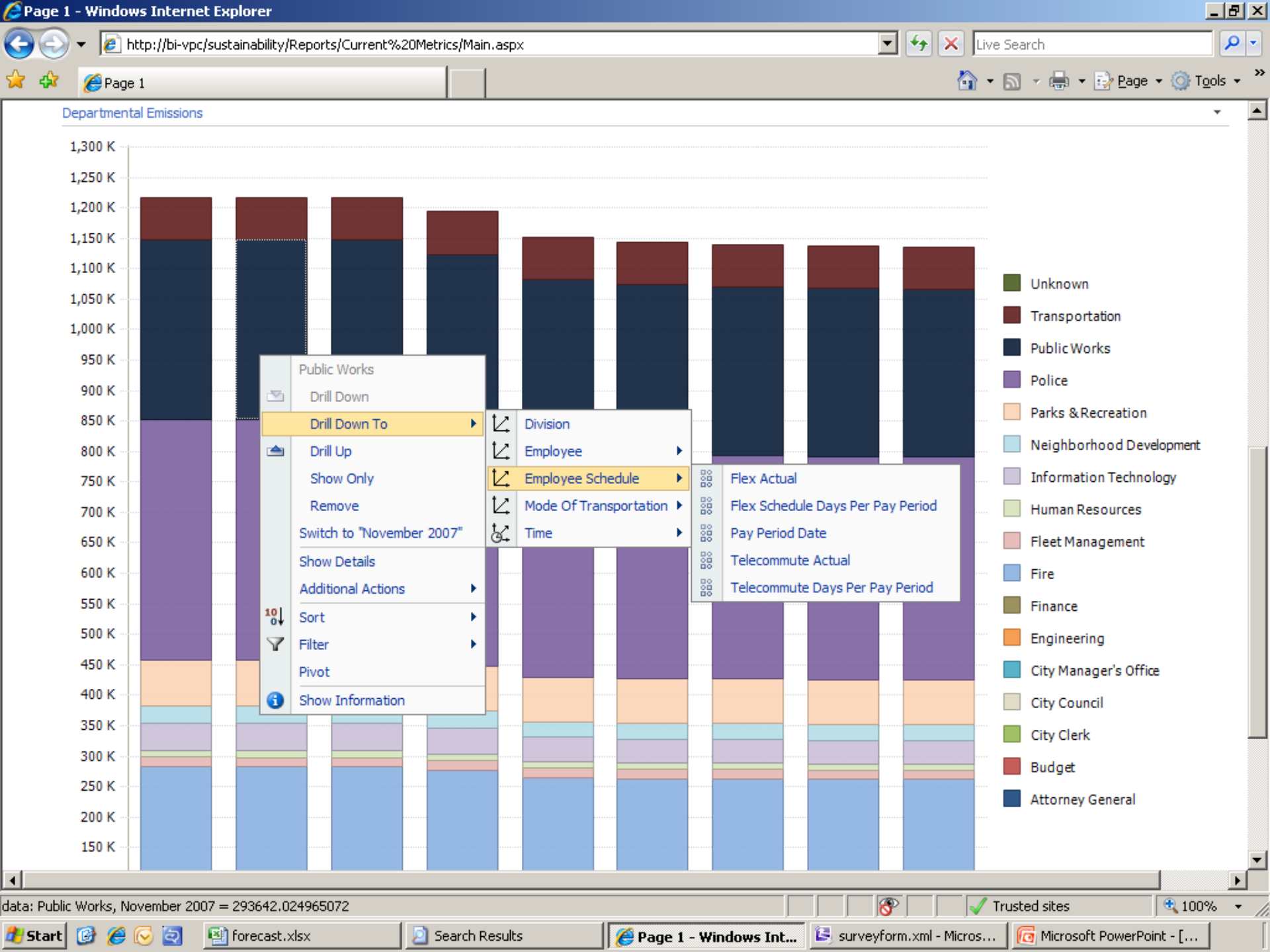
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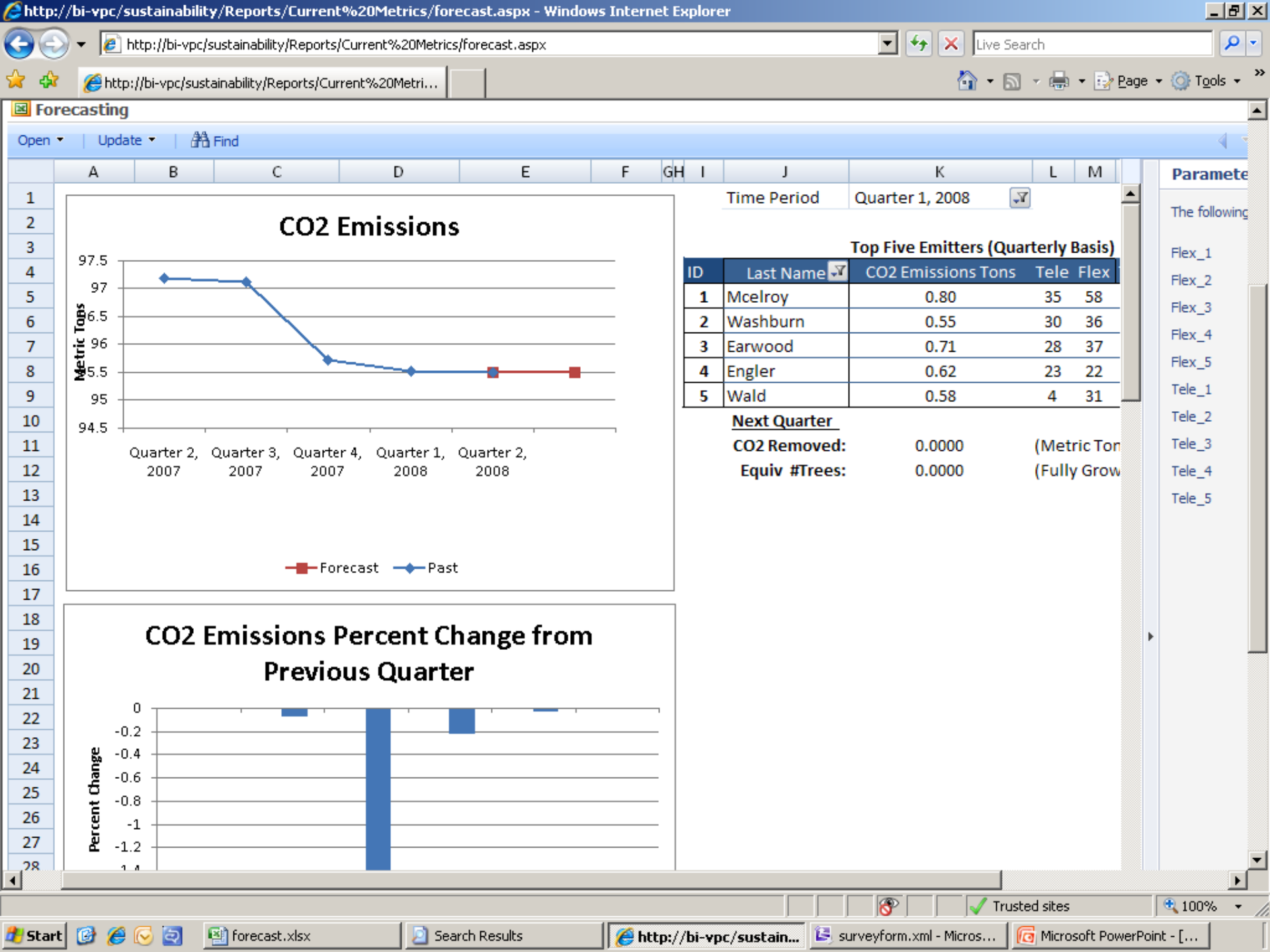
Sustainability

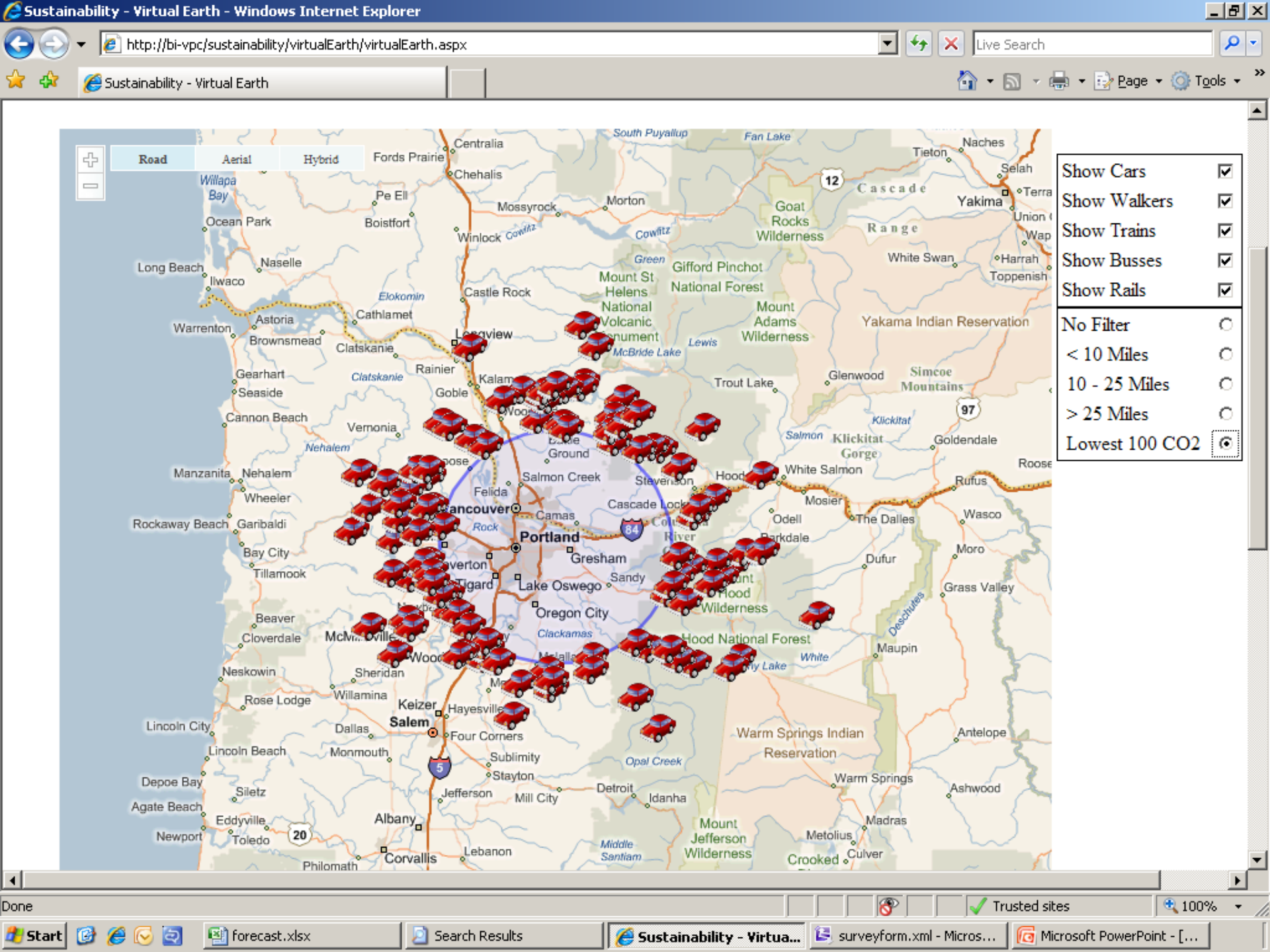
	Previous Period	Current Period	Difference	Goal	Energy Savings	Lbs. of CO2 Removed	Acres of Trees Equivalent	# Cars Removed
Sustainability Initiatives								
Employee Commuting Emissions Summary					\$40,434 ↑	195,331 ↑	24 ↑	17 ↑
Telework Initiative								
Current Telework Employees	192	219	27 ↑	901 ⬇	\$33,502 ↑	161,846 ↑	20 ↑	14 ↑
Current % Teleworkers	10%	11%	1% ↑	45% ⬇				
Flexible Work Schedule Initiative								
Current Flex Schedule Employees	496	484	-12 ↓	401 ●	\$6,931 ↑	33,485 ↑	4 ↑	3 ↑
Current % on Flexible Schedule	25%	24%	-1% ↓	20% ●				
Desktop PC Power Management	55	600	545 ↑	2,612 ⬇	\$50,010 ↑	706,930 ↑	88 ↑	62 ↑
IT Data Center	90	100	10 ↑	535 ⬇	\$77,625 ↑	1,350,000 ↑	167 ↑	118 ↑
Fleet Management	3	35	32 ↑	210 ⬇	\$56,536 ↑	273,102 ↑	34 ↑	24 ↑
Energy Efficient Traffic Lights	5	255	250 ↑	400 ⬇	\$107,087 ↑	69,088 ↑	9 ↑	6 ↑

Departmental Emissions



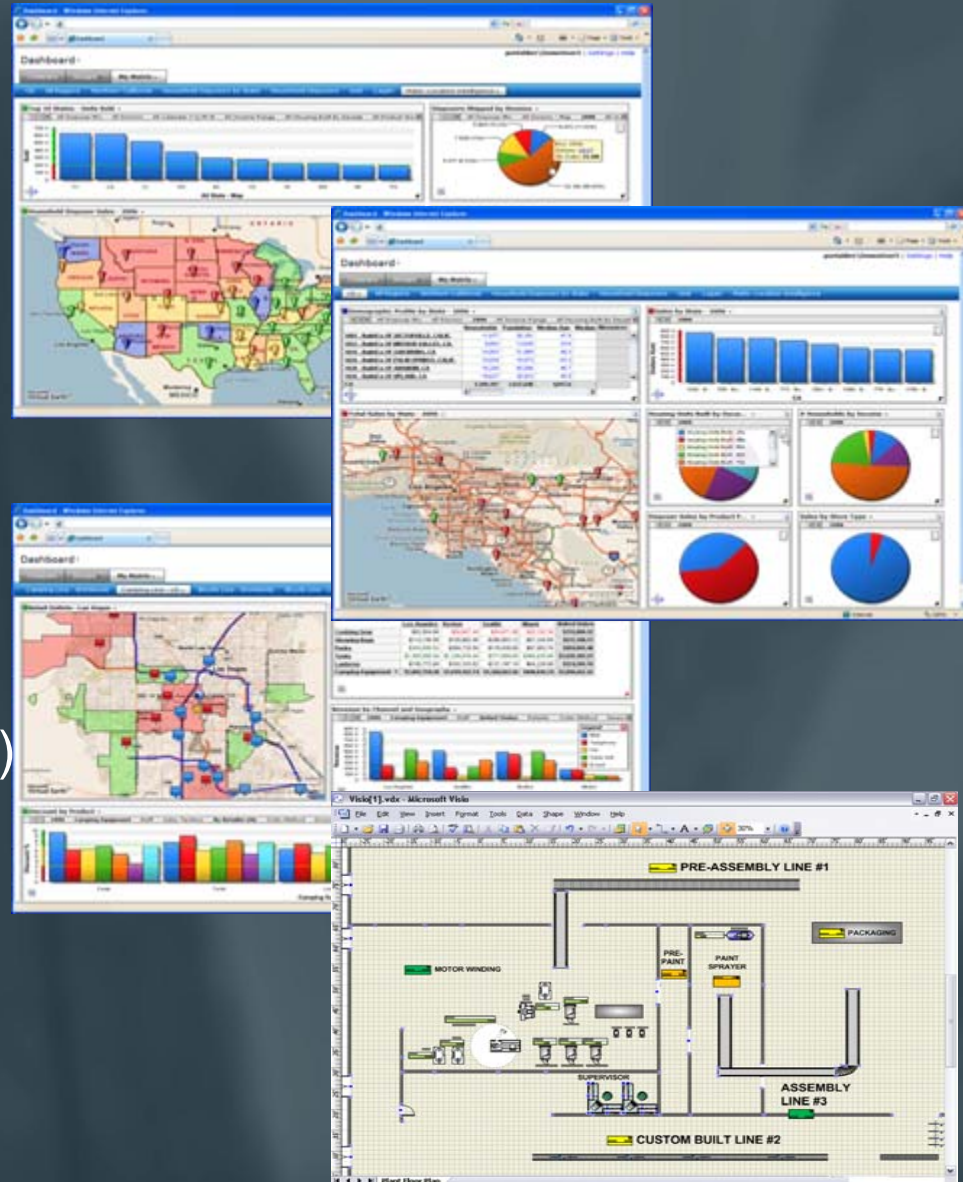






Location Intelligence

- Extremely useful for business insight... over 80% of business data records have a location component
- Navigate ‘Location Data’ with interactive maps fully integrated with SPS dashboards
- Patterns and relationships that would be obscure in tables and charts jump to life
- Virtual Earth (for geospatial data)
- Visio for internal world (plant/facility maps, workflow diagrams)





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Improving Lives by Improving Transportation

News

- [NJDOT opens improved Route 70 and Massachusetts Avenue intersection in Toms River](#)
- [NJDOT announces new traffic pattern for Route 5 bridge in Palisades Park](#)
- [NJDOT plans roadway rehabilitation on Route 78](#)
- [NJDOT to rehabilitate Haynes Avenue over Amtrak in Newark](#)
- [NJDOT to open Essex Street bridge in Lodi and Maywood](#)
- [NJDOT completes Route 46 Van Houten Avenue improvements](#)
- [NJDOT announces the 2008 Urban Gateway Enhancement Program](#)



BI PORTAL

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Measure: **Total Incidents** ▾

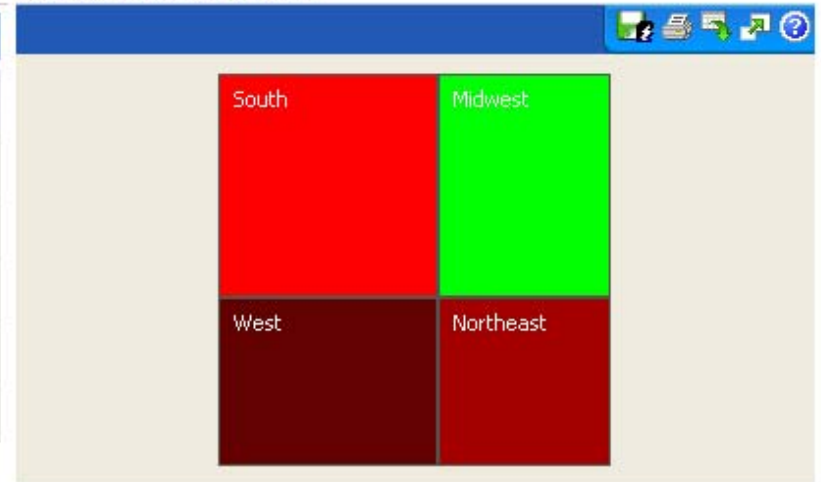
States: **Midwest , Northeast , South , West** ▾

Year: **2000** ▾

National Overview

▾ Incidents vs Fatalities By Region ▾

	2000		
	Actual	National Avg	Trend
United States of America			● ↘
Midwest	4,079,870	4,372,850	● ↓
Northeast	3,054,415	2,712,567	◆ ↗
South	5,279,438	5,801,382	● ↓
West	3,935,783	4,400,170	● ↓

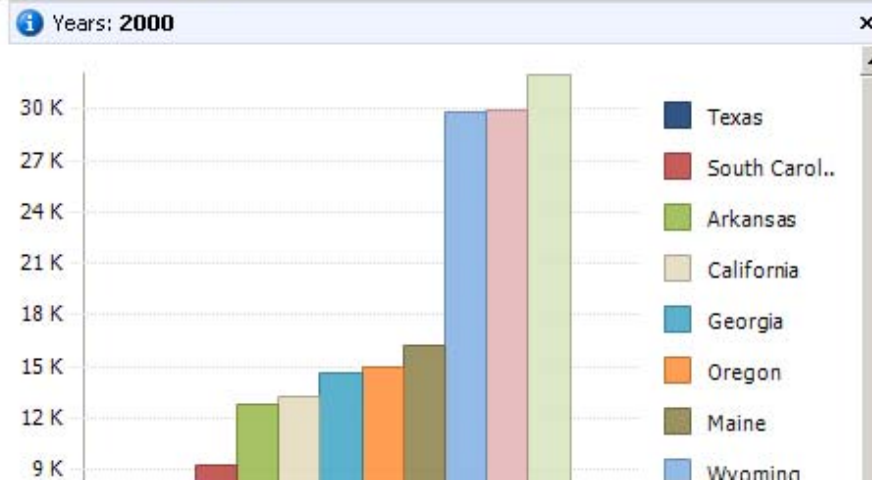


Top 10 States - Incidents

▾ Top 10 States - Injuries

▾ Top 10 States - Fatalities

Years: 2000			x		
States	State	Rank	Incident Count		
South Carolina		1	7,003		
Missouri		2	14,923		
North Dakota		3	30,367		
Alabama		4	31,203		
Kentucky		5	61,715		
California		6	76,034		
Hawaii		7	92,317		
Illinois		8	93,280		
Utah		9	106,428		





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Measure: Total Incidents

States: Midwest, Northeast, South, West

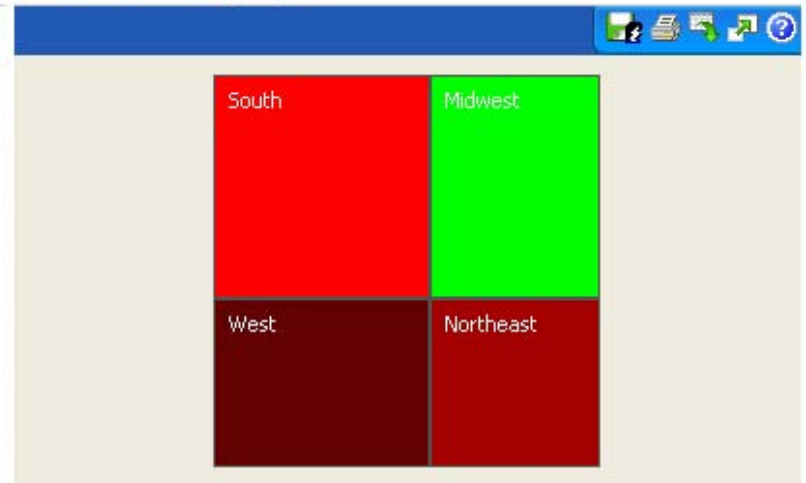
Year: 2000

National Overview
Fatalities
Injuries
Total Incidents

Incidents vs Fatalities By Region

Filter Mode

	2000		
	Actual	National Avg	Trend
United States of America			
Midwest	4,079,870	4,372,850	
Northeast	3,054,415	2,712,567	
South	5,279,438	5,801,382	
West	3,935,783	4,400,170	



Top 10 States - Incidents

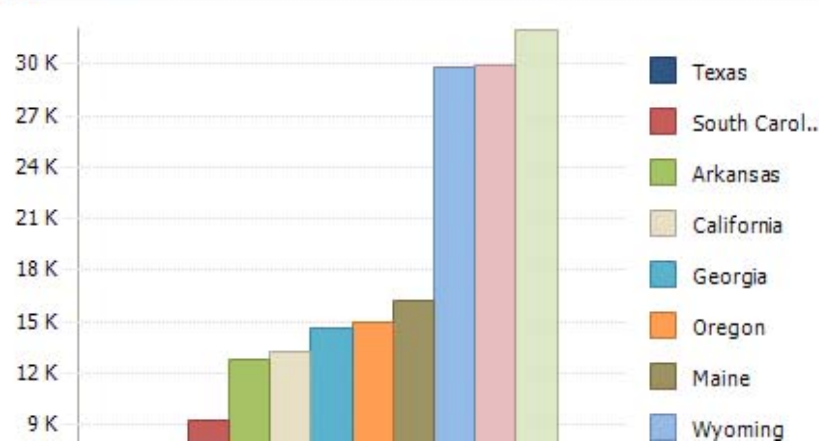
Top 10 States - Injuries

Top 10 States - Fatalities

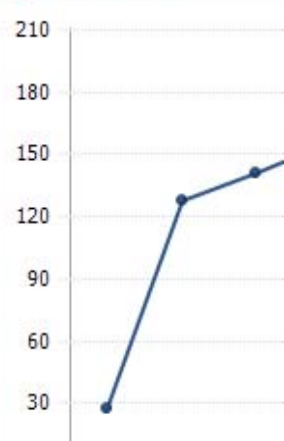
Years: 2000

States	State	Rank	Incident Count
	South Carolina	1	7,003
	Missouri	2	14,923
	North Dakota	3	30,367
	Alabama	4	31,203
	Kentucky	5	61,715
	California	6	76,034
	Hawaii	7	92,317
	Illinois	8	93,280
	Utah	9	106,428

Years: 2000



Years: 2000





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Measure: **Fatalities**

States: **Midwest , Iowa , Northeast , South , West**

Year: **2000**

National Overview



	Actual	Measure
United States of America		
Midwest	6,898	
Northeast	12,642	
South	13,703	
West	11,722	

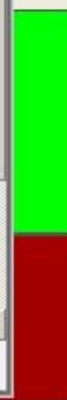
☐ All

☒ Midwest

- ☐ Illinois
- ☐ Indiana
- ☒ Iowa
- ☐ Kansas
- ☐ Michigan
- ☐ Minnesota
- ☐ Missouri
- ☐ Nebraska
- ☐ North Dakota
- ☐ Ohio

☐ Select All

Apply Cancel



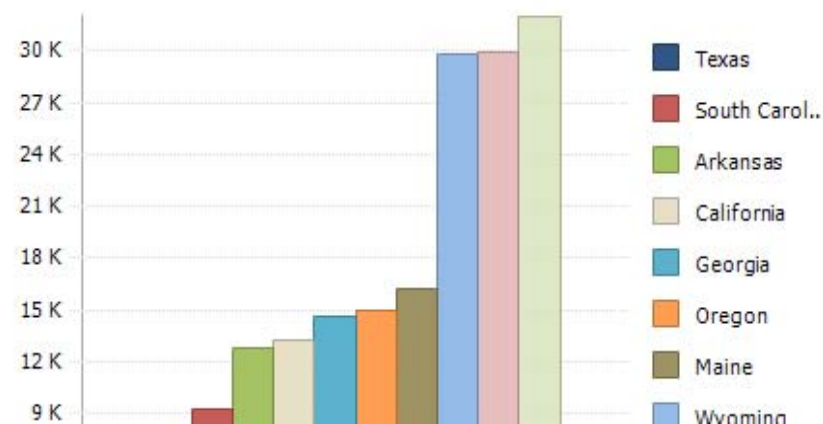
Top 10 States - Incidents

Years: **2000**

States	State	Rank	Incident Count
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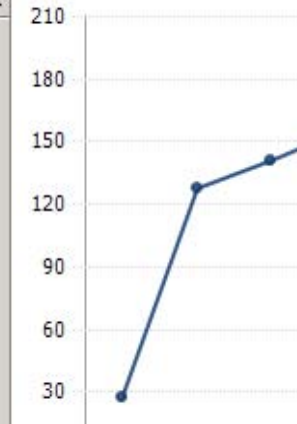
Top 10 States - Injuries

Years: **2000**



Top 10 States - Fatalities

Years: **2000**





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Measure: **Fatalities** ▾

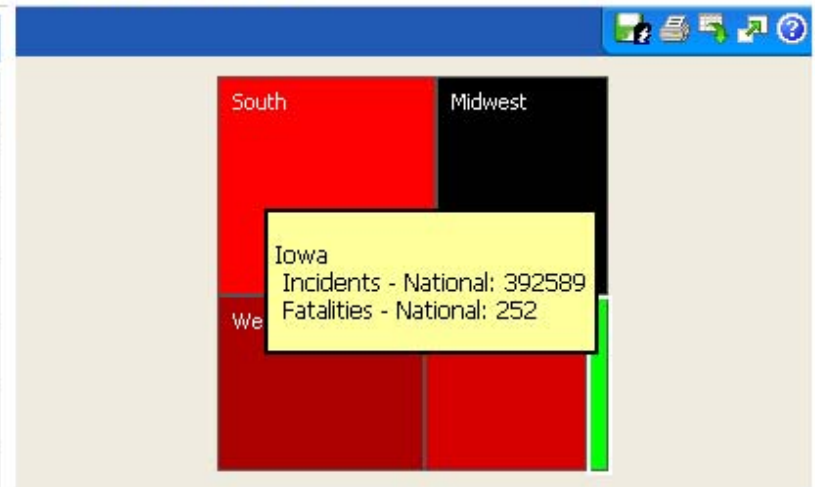
States: **Midwest , Iowa , Northeast , South , West** ▾

Year: **2000** ▾

National Overview

Incidents vs Fatalities By Region ▾

	2000		
	Actual	National Avg	Trend
United States of America			● ↓
Midwest	6,898	16,150	● ↓
Iowa	252	2,050	● ↓
Northeast	12,642	15,378	● ↓
South	13,703	30,223	● ↓
West	11,722	17,899	● ↓



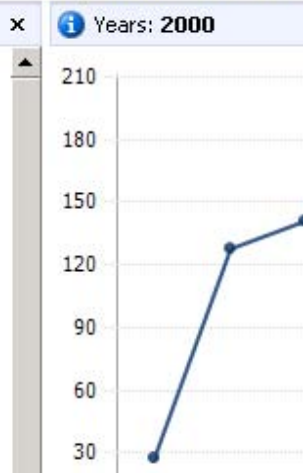
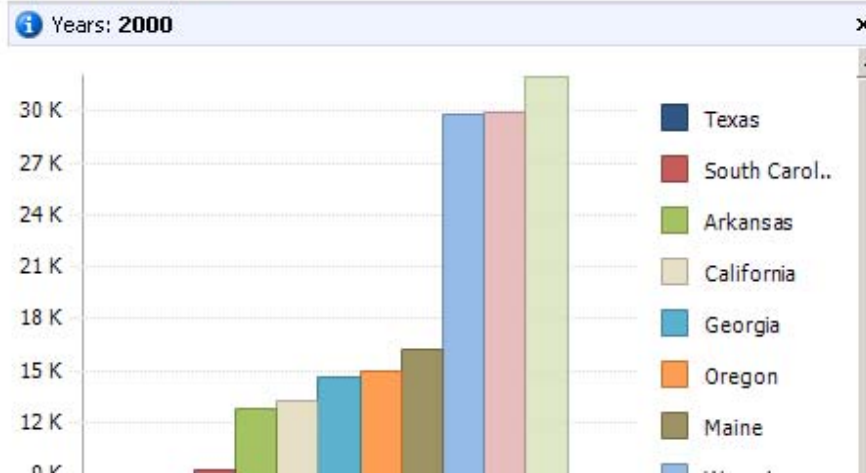
Top 10 States - Incidents

Top 10 States - Injuries

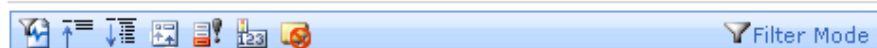
Top 10 States - Fatalities

Years: 2000 x

States	State	Rank	Incident Count
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Alabama		4	31,203
Kentucky		5	61,715
California		6	76,034
Hawaii		7	92,317
Illinois		8	93,280
Utah		9	106,428



Overview



	Actual	Target	Manager
New Jersey State		🟡	
Incidents		🟡	Mike H
Reduce Total Incidents	4026	🔴	Susan N
Reduce Alcohol Related Incidents	64	🟢	Mike H
Reduce Day Time Incidents	2710	🔴	Sandy L
Injuries		🟡	Sarah P
Reduce Total Injuries	1125	🔴	Chris W
Reduce Injuries when Wet Road Conditions	224	🟢	Rob R
Fatalities		🟢	John F
Reduce Total Fatalities	6	🟢	Bill K
Reduce Fatalities in the Rain	2	🟢	John F

Strategy Map





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Time: **2000** ▾

NJOverview ▾



Filter Mode

	Actual	Target	Manager
[-] New Jersey State			
[-] Incidents			Mike H
Reduce Total Incidents	4026		Susan N
Reduce Alcohol Related Incidents	64		Mike H
Reduce Day Time Incidents	2710		Sandy L
[-] Injuries			Sarah P
Reduce Total Injuries	1125		Chris W
Reduce Injuries when Wet Road Conditions	224		Rob R
[-] Fatalities			John F
Reduce Total Fatalities	6		Bill K
Reduce Fatalities in the Rain	2		John F



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







Chart Details II

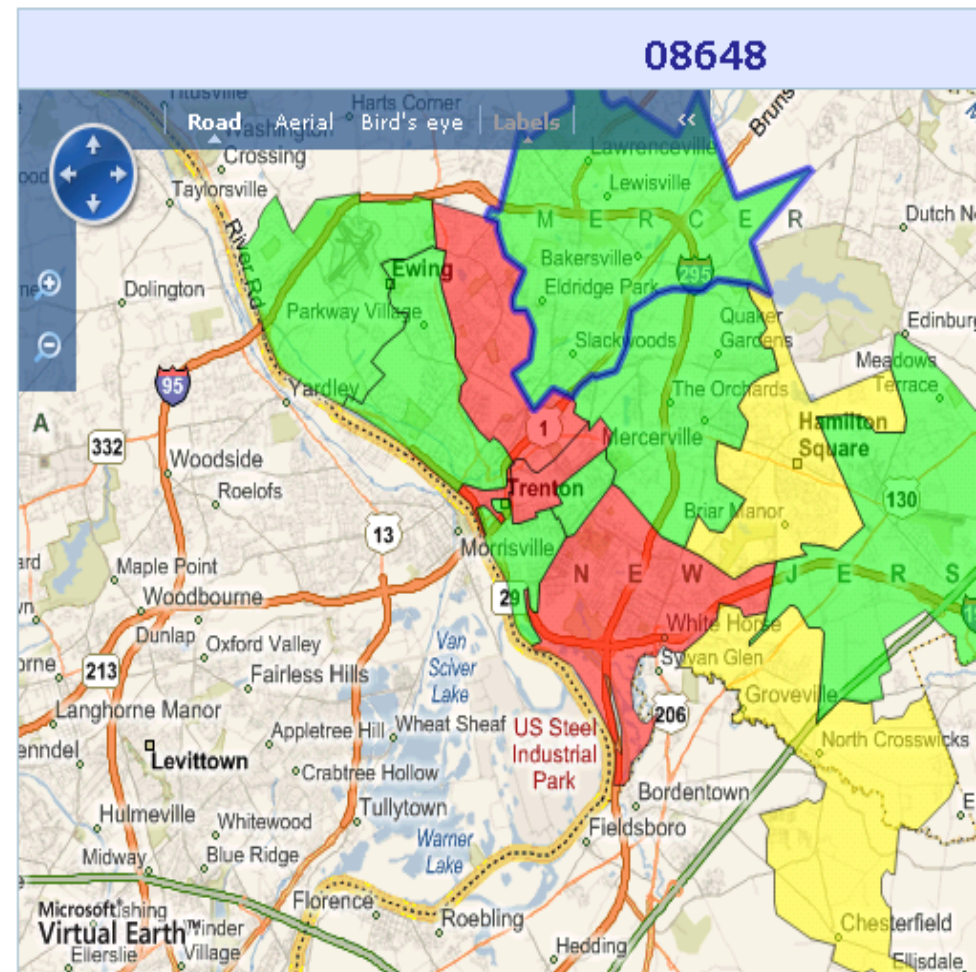
Reports

- Reports Library

Measure: Total Incidents Time: 2000

ZipCodes

	2000		
	Actual	Target	Trend
08608	381	154 	
08609	917	820 	
08610	917	387 	
08611	622	653 	
08618	690	694 	
08619	79	204 	
08620	51	23 	
08638	270	225 	
08648	14	25 	
08690	139	134 	



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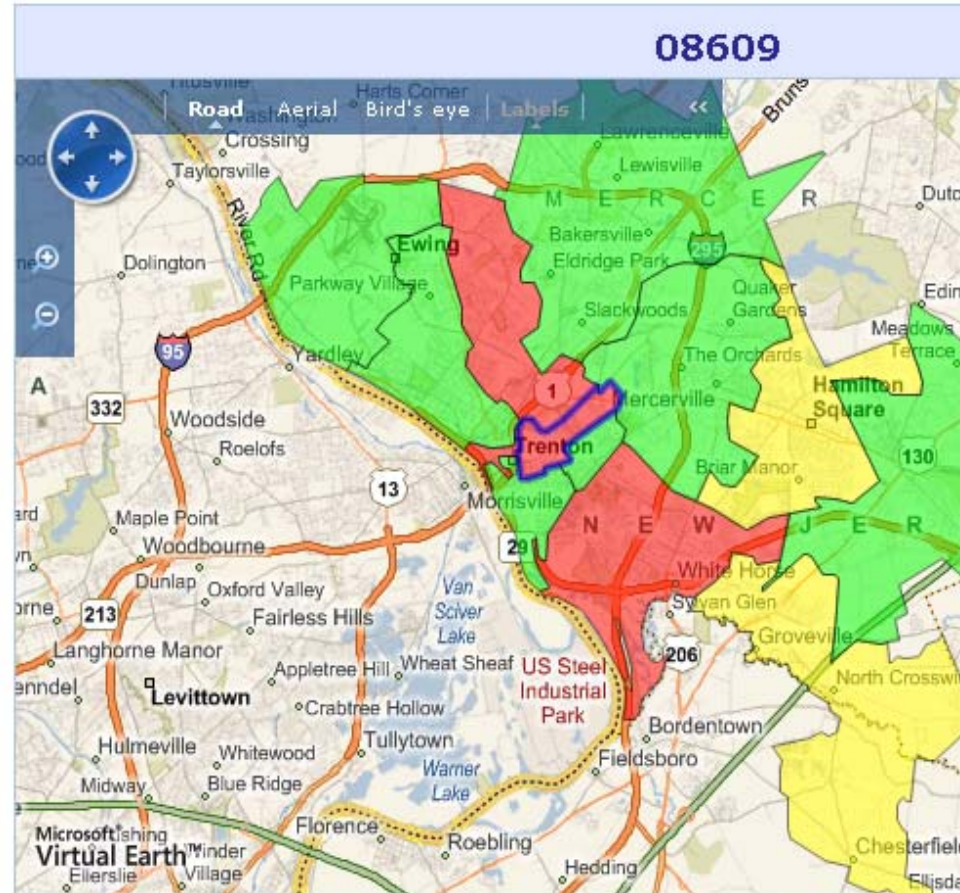
- MSN

Measure: Total Incidents

Time: 2000 ▼

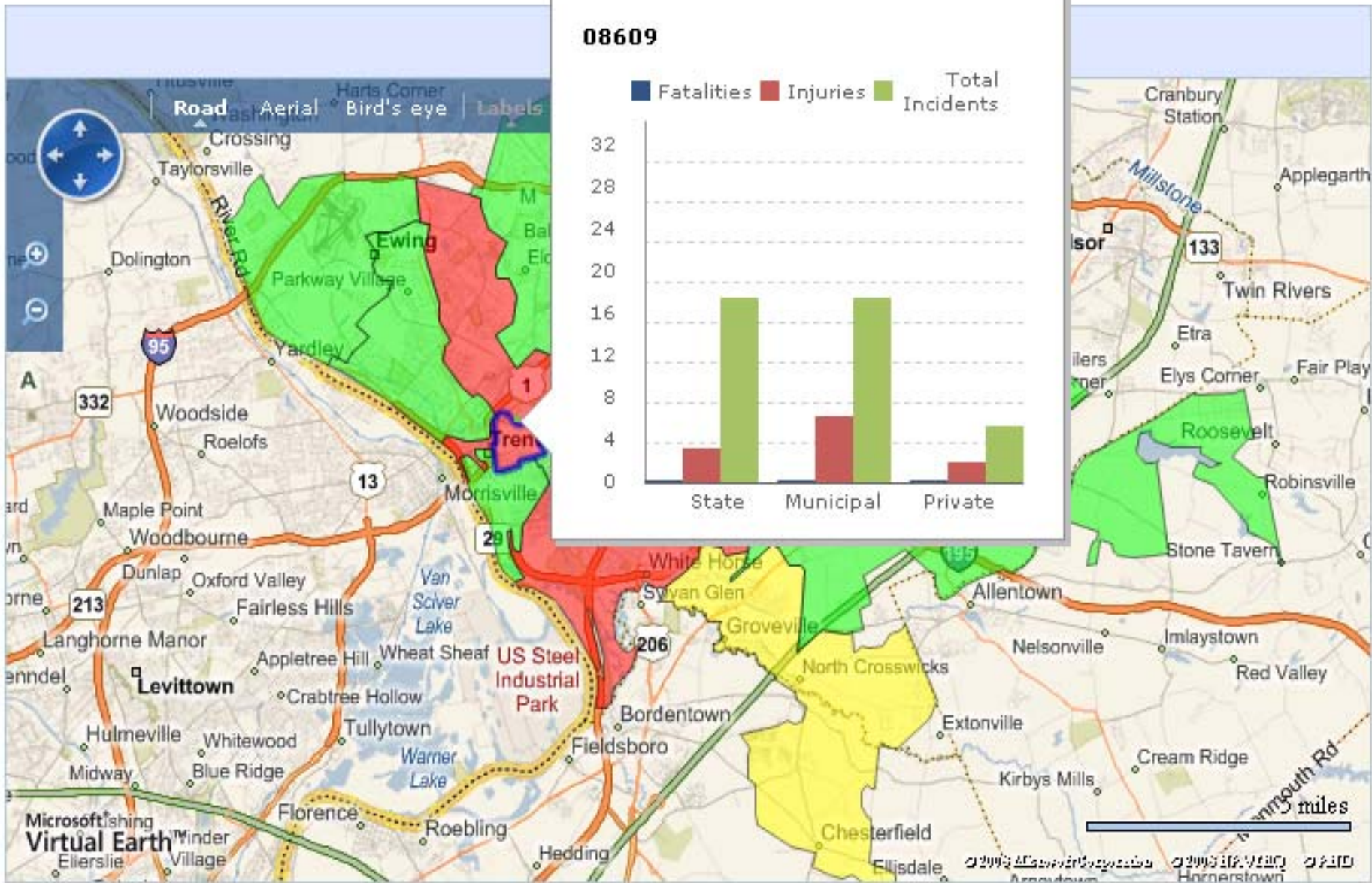
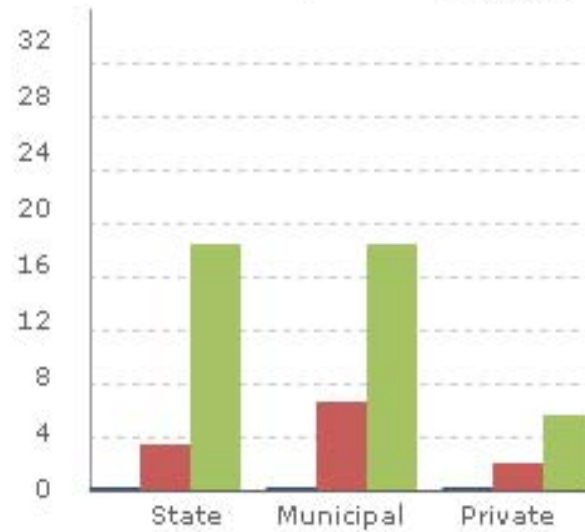
ZipCodes

	2000		
	Actual	Target	Trend
08608	381	154	 
08609	917	820	 
08610	917	387	 
08611	622	653	 
08618	690	694	 
08619	79	204	 
08620	51	23	 
08638	270	225	 
08648	14	25	 
08690	139	134	 
08691	176	199	 



08609

■ Fatalities
 ■ Injuries
 ■ Total Incidents



Microsoft BI: 'Just Do It in Excel'

Enterprise Applications



By David Hatch and Andrew Stamer
TechNewsWorld
01/08/09 10:12 AM PT

Print Version
 E-Mail Article
 Reprints

While enterprises tend to use powerful and dedicated software for business intelligence functions, many users eventually migrate the data to the more comfortable confines of Excel. Microsoft is now bringing business intelligence functions to Excel, a step business users might welcome.

<http://www.technewsworld.com/story/Microsoft-BI-Just-Do-It-in-Excel-65595.html>



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From Access From Web From Text From Other Sources Existing Connections Get External Data Refresh All Connections Properties Edit Links Sort & Filter Sort Filter Clear Reapply Advanced Data Tools Text to Columns Remove Duplicates Data Validation Consolidate What-If Analysis Group Ungroup Subtotal Outline

A1

fx

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
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26															

Sheet1

Sheet2

Sheet3



Book2 - Microsoft Excel

PivotTable Tools

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Design

PivotTable Name: PivotTable1

Options

PivotTable

Active Field: Road Surface Con

Field Settings

Active Field

Group Selection

Ungroup

Group Field

Group

Sort

Sort

Refresh

Change Data Source

Data

Clear

Select

Move PivotTable

Actions

PivotChart

Formulas

OLAP tools

Tools

Field List

+/- Buttons

Field Headers

Show/Hide

A5

Icy

	A	B	C	D	E	F	G	H	I	J
1										
2										
3	Row Labels									
4	Dry									
5	Icy									
6	Oil									
7	Sand/Mud/Dirt									
8	Slush									
9	Snowy									
10	UNKNOWN									
11	Water (standing/moving)									
12	Wet									
13	Grand Total									
14										
15										
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20										
21										
22										
23										
24										
25										
26										

PivotTable Field List

Show fields related to: (All)

+ More Fields

RoadDividedBy

☐ Road Divided By

RoadSurface

☐ Road Surface

RoadSurfaceCondition

☒ Road Surface Condition

RoadSystem

☐ HRoadSystem

Drag fields between areas below:

Report Filter

Column Labels

Row Labels

Road Surface...

Values

☐ Defer Layout Update

Update

Ready

Sheet1 Sheet2 Sheet3

100%

Start NJ ZipCodes - Windows I... IncidentByCollisionType... Book2

Book2 - Microsoft Excel

PivotTable Tools

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Design

PivotTable Name: PivotTable1

Options

PivotTable

Active Field: Road Surface Con

Field Settings

Active Field

Group Selection

Ungroup

Group Field

Group

Sort

Sort

Refresh

Change Data Source

Data

Clear

Select

Move PivotTable

Actions

PivotChart

Formulas

OLAP tools

Tools

Field List

+/- Buttons

Field Headers

Show/Hide

A5

fx

Icy

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3	Row Labels	Fatalities									
4	Dry	4									
5	Icy	1									
6	Slush	0									
7	Snowy	0									
8	UNKNOWN	0									
9	Wet	2									
10	Grand Total	7									
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12											
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25											
26											

PivotTable Field List

Show fields related to: (All)

☐ Incidents - National

☐ Injuries - National

☒ v Fact Crash Stat Measures

☐ Measure

☒ v Fact Crash Stats

☒ Fatalities

☐ Injuries

☐ Total Incidents

☒ v Fact National Stats

Drag fields between areas below:

☒ Report Filter

☐ Column Labels

☒ Row Labels

☒ Values

Road Surface...

Fatalities

☐ Defer Layout Update

Update

Sheet1

Sheet2

Sheet3

Ready

Start

NJ ZipCodes - Windows I...

IncidentByCollisionType....

Book2

Book2 - Microsoft Excel

PivotTable Tools

HomeInsertPage LayoutFormulasDataReviewViewPerformancePointOptionsDesign

PivotTable Name: PivotTable1

Options

PivotTable

Active Field: Road Surface Con

Field Settings

Active Field

Group Selection

Ungroup

Group Field

Group

Sort

Sort

Sort

Refresh

Change Data Source

Data

Clear

Select

Move PivotTable

Actions

PivotChart

Formulas

OLAP tools

Tools

Field List

+/- Buttons

Field Headers

Show/Hide

A5

fx

Dry

	A	B	C	D	E	F	G	H	I	J	K
1											
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26											

PivotTable Field List

Show fields related to: (All)

☐ Incidents - National

☐ Injuries - National

☒ v Fact Crash Stat Measures

☐ Measure

☒ v Fact Crash Stats

☒ Fatalities

☒ Injuries

☐ Total Incidents

☒ v Fact National Stats

Drag fields between areas below:

Report Filter

Column Labels

Row Labels

Values

Road Surface...

Fatalities

Injuries

☐ Defer Layout Update

Update

Sheet1Sheet2Sheet3

Ready

100%

Start

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PivotTable Name:

PivotTable1

Options

PivotTable

Active Field:

Road Surface Con

Field Settings

Active Field

Group Selection

Ungroup

Group Field

Group

Sort

Sort

Sort

Refresh

Change Data Source

Data

Clear

Select

Move PivotTable

Actions

PivotChart

Formulas

OLAP tools

Tools

Field List

+/- Buttons

Field Headers

Show/Hide

A5

fx

Dry

	A	B	C	D	E	F	G	H	I	J	K
1											
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16											
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18											
19											
20											
21											
22											
23											
24											
25											
26											

PivotTable Field List

Show fields related to:

(All)

☐ Incidents - National

☐ Injuries - National

☒ v Fact Crash Stat Measures

☐ Measure

☒ v Fact Crash Stats

☒ Fatalities

☒ Injuries

☒ Total Incidents

☐ v Fact National Stats

Drag fields between areas below:

Report Filter

Column Labels

Σ Values

Row Labels

Σ Values

Road Surface...

Fatalities

Injuries

Total Incidents

☐ Defer Layout Update

Update

Sheet1

Sheet2

Sheet3

Ready

100%

Start

NJ ZipCodes - Windows I...

IncidentByCollisionType....

Book2

Book2 - Microsoft Excel

PivotTable Tools

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Options

Design

PivotTable Name: PivotTable1

Options

Active Field: Road Surface Con

Field Settings

Group Selection

Ungroup

Group Field

Sort

Sort

Refresh

Change Data Source

Clear

Select

Move PivotTable

PivotChart

Formulas

OLAP tools

Field List

+/- Buttons

Field Headers

Tools

Show/Hide

A5

fx

Dry

	A	B	C	D	E	F	G	H	I	J
1										
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3										
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24										
25										
26										

PivotChart

Insert a PivotChart based on the data in this PivotTable.

Show fields related to:

(All)

☐ Incidents - National

☐ Injuries - National

☒ v Fact Crash Stat Measures

☐ Measure

☒ v Fact Crash Stats

☒ Fatalities

☒ Injuries

☒ Total Incidents

☒ v Fact National Stats

Drag fields between areas below:

Report Filter

Column Labels

Σ Values

Row Labels

Σ Values

Road Surface...

Fatalities

Injuries

Total Incidents

☐ Defer Layout Update

Update

Sheet1

Sheet2

Sheet3

Ready

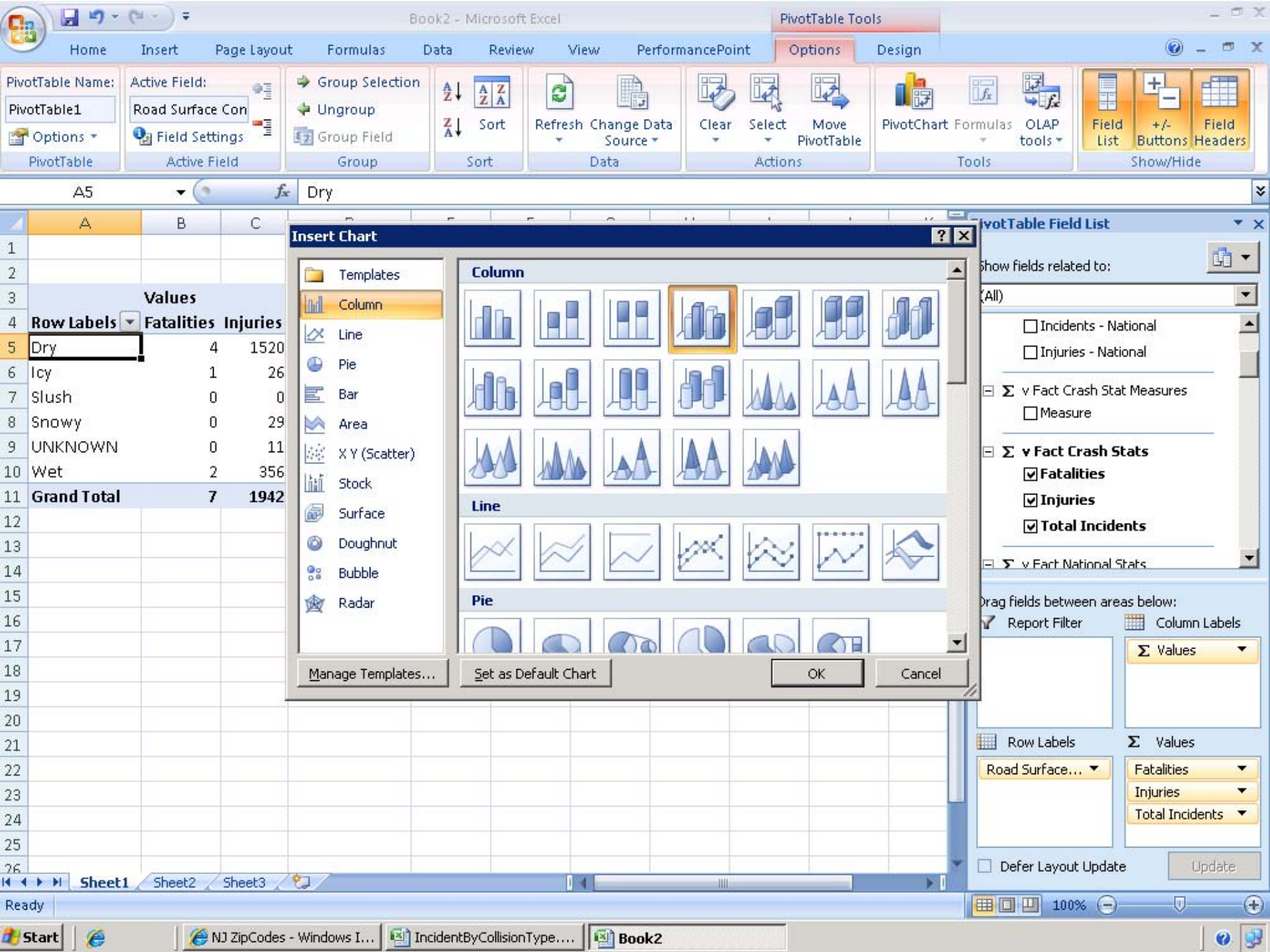
100%

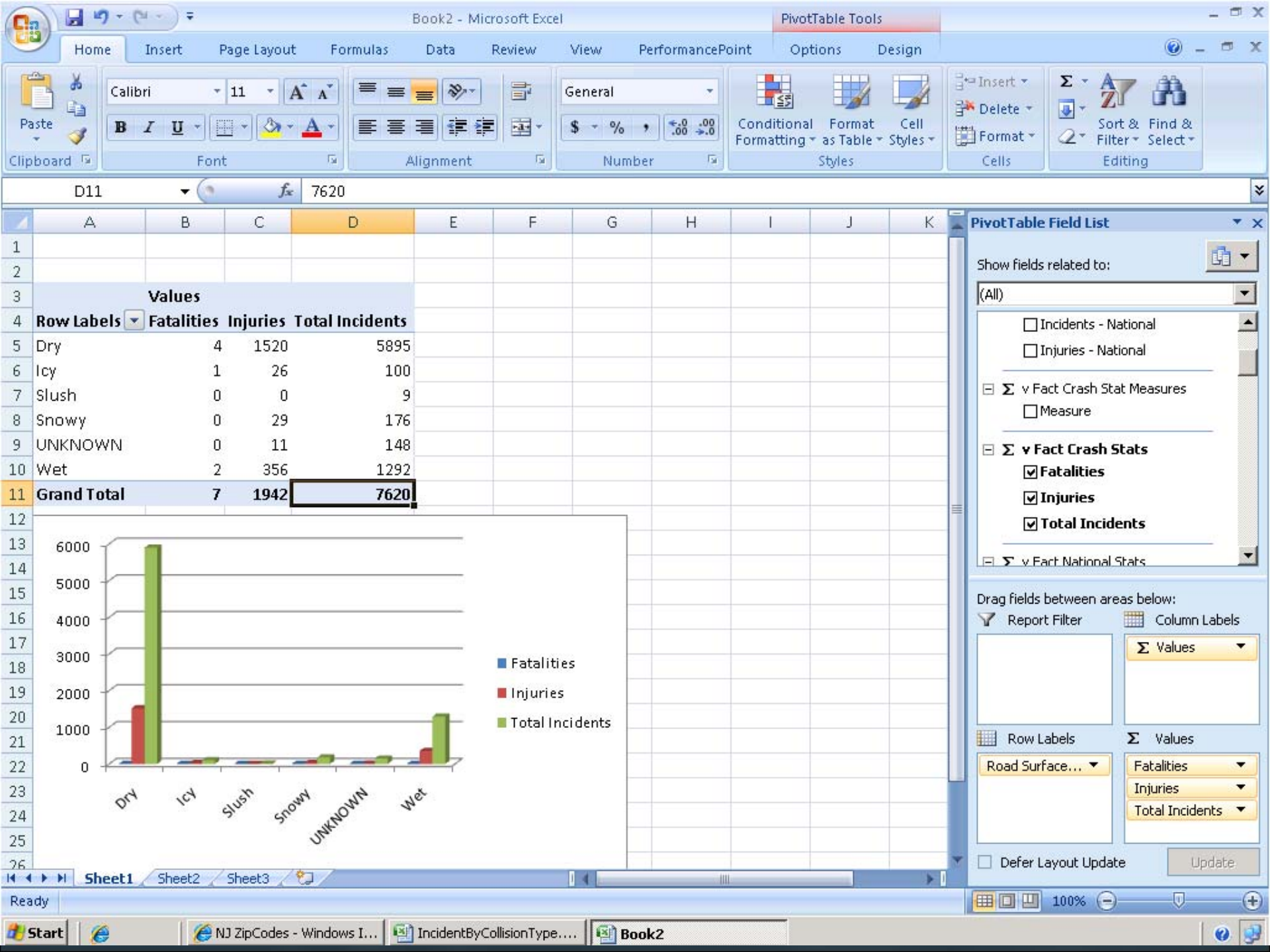
Start

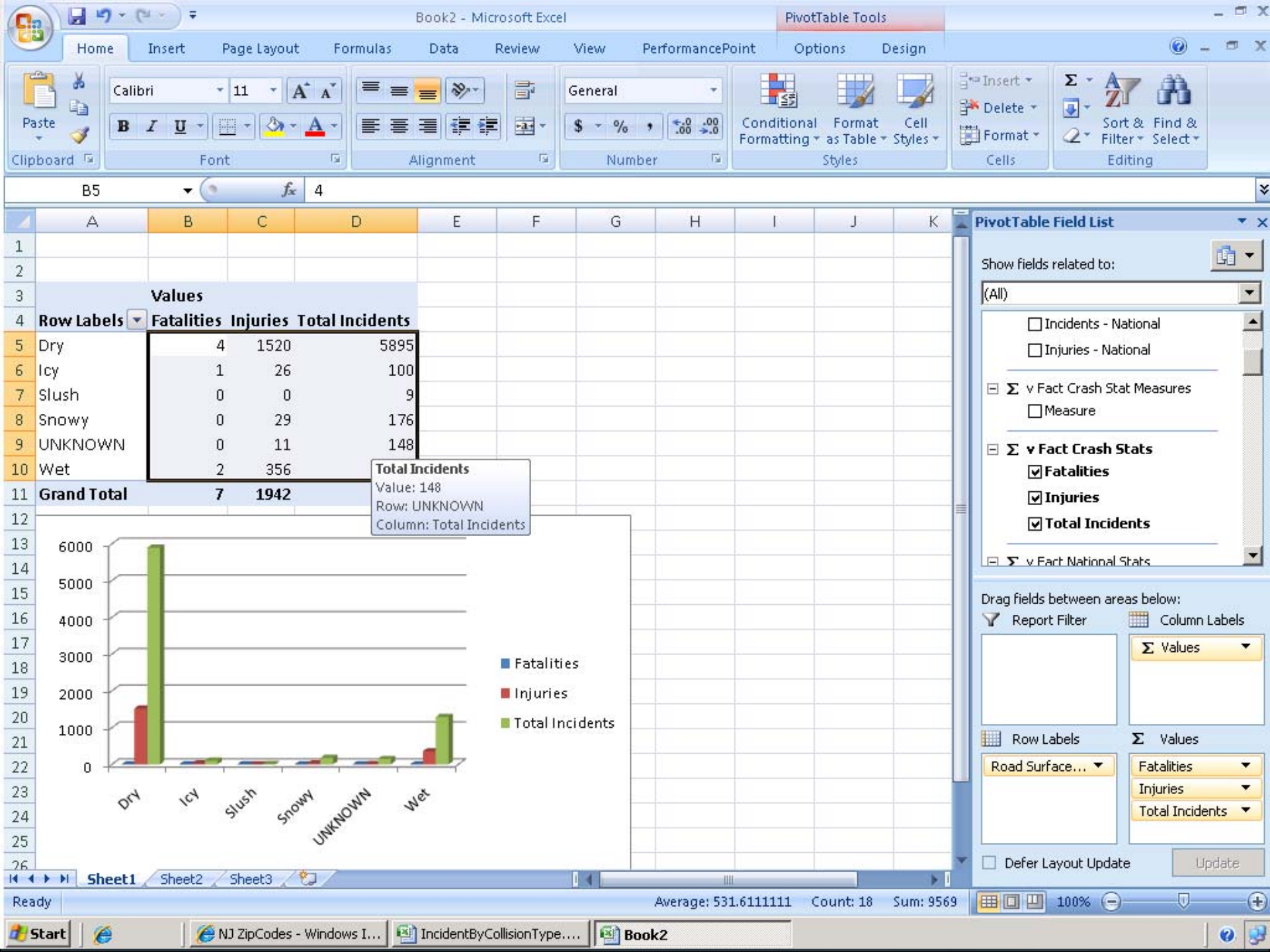
NJ ZipCodes - Windows I...

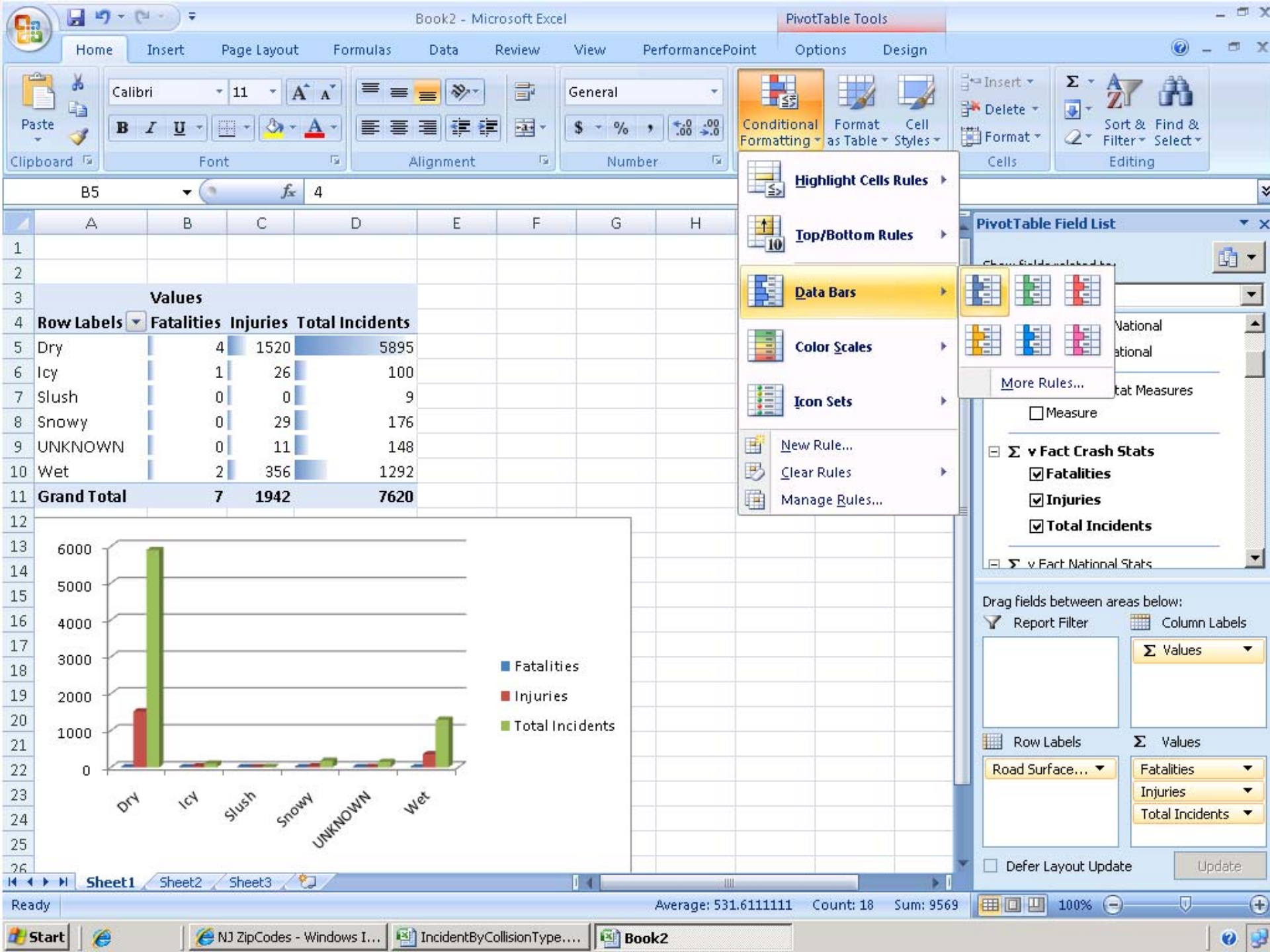
IncidentByCollisionType....

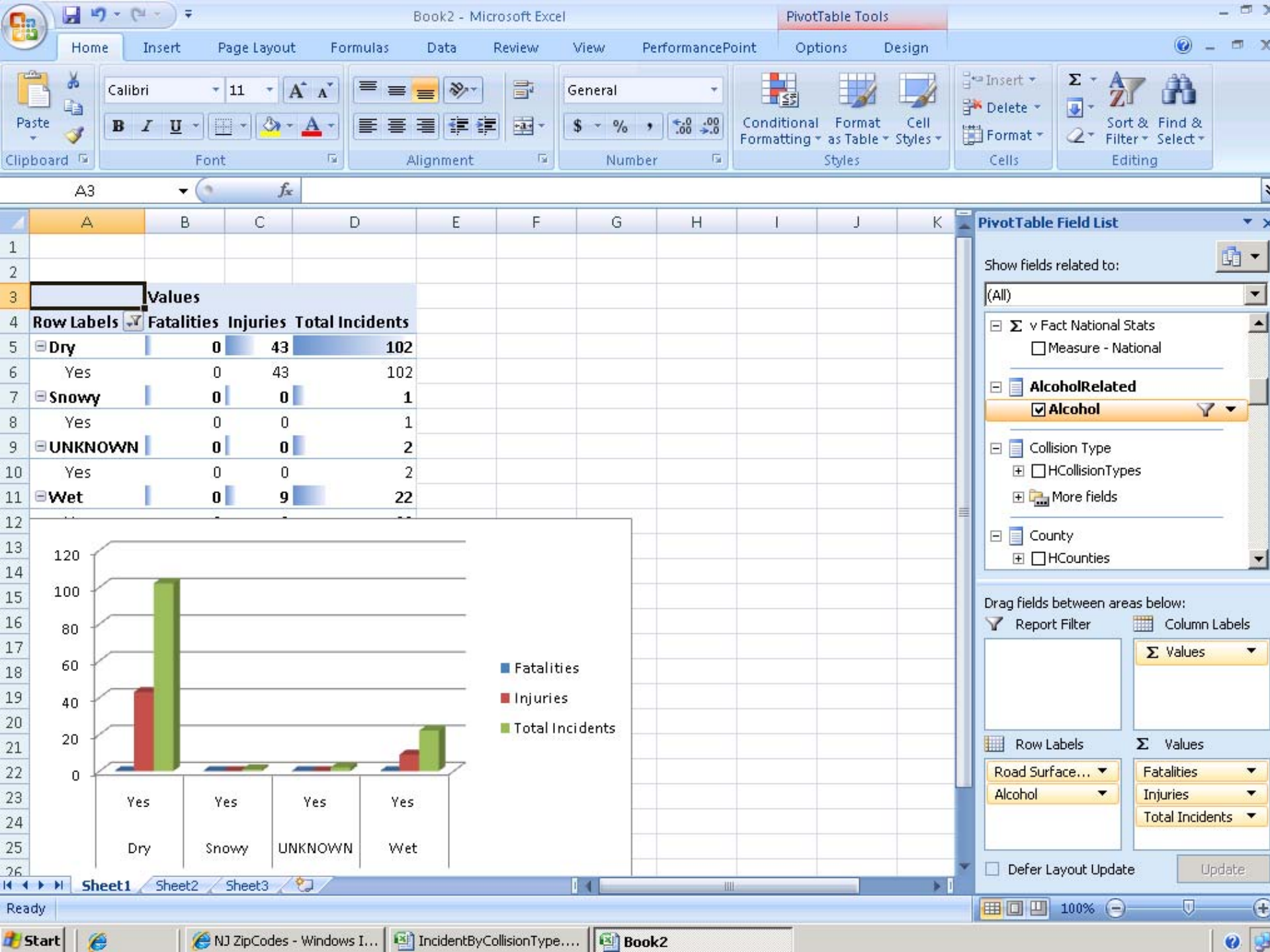
Book2











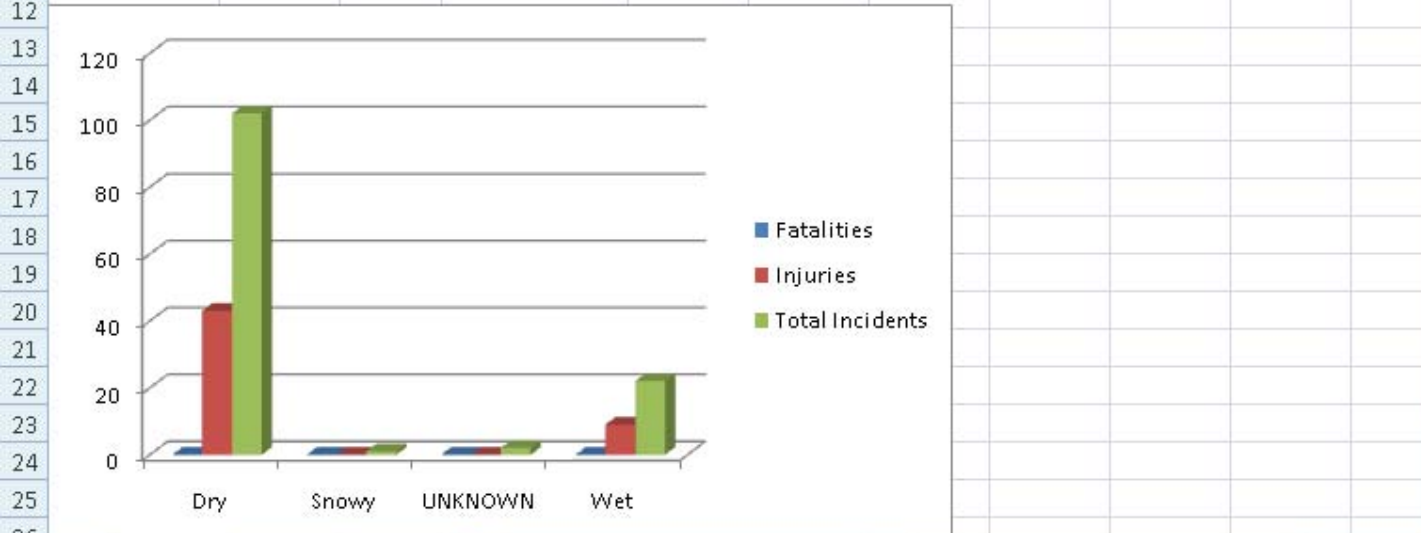
Book2 - Microsoft Excel

PivotTable Tools

Home Insert Page Layout Formulas Data Review View PerformancePoint Options Design

Clipboard Font Alignment Number Styles Cells Editing

	A	B	C	D	E	F	G	H	I	J	K
1	Alcohol	Yes									
2											
3		Values									
4	Row Labels	Fatalities	Injuries	Total Incidents							
5	Dry	0	43	102							
6	Snowy	0	0	1							
7	UNKNOWN	0	0	2							
8	Wet	0	9	22							
9	Grand Total	0	52	127							



PivotTable Field List

Show fields related to:

(All)

- ☒ v Fact National Stats
 - ☐ Measure - National
- ☒ AlcoholRelated
 - ☒ Alcohol
- ☒ Collision Type
 - ☐ HCollisionTypes
 - ☐ More fields
- ☒ County
 - ☐ HCounties

Drag fields between areas below:

Report Filter: Alcohol

Column Labels: Σ Values

Row Labels: Road Surface...

Σ Values: Fatalities, Injuries, Total Incidents

☐ Defer Layout Update Update

Big Changes



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you own